
U.S. Department of the Interior • U.S. Geological Survey

MINERAL INDUSTRY SURVEYS

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Soda Ash and Sodium Sulfate, Monthly

MINES FaxBack: (703)648-4999

Soda Ash Doc. #610100

Sodium Sulfate Doc. #620100

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SODA ASH AND SODIUM SULFATE IN JUNE 1996

Natural soda ash production in June was 866,000 metric tons, 2% higher than the previous month's production, according to the U.S. Geological Survey. Ending inventories were 284,000 tons, a 9% increase from that of the preceding month. Wyoming trona production in June was 1,280,000 tons. Total production of chemical caustic soda as soda ash equivalent, based on data from all three producers, was 20,400 metric tons in June.

Apparent consumption of soda ash for May was 598,000 tons, 24% higher than the May 1995 level of 481,000 tons. Exports and imports of soda ash in May were 217,000 tons and 8,440 tons, respectively. The cumulative soda ash statistics through May 1996, compared with those of the corresponding period in 1995, were as follows: production 1% lower, imports 21% higher, exports 4% lower, ending stocks 53% higher, and apparent consumption 2% higher.

SODA ASH ON THE INTERNET

A list of soda ash and soda ash-related internet addresses is included at the end of this report. The list contains web sites of producing companies, trade associations, consumers, and consultants. The list will continue to grow as new listings are obtained. The Soda Ash and Sodium Sulfate Mineral Industry Surveys monthly report is available on the worldwide web beginning with the May 1996 issue. To obtain a copy of this report and instructions on how to retrieve it, please refer to the U.S. Geological Survey's internet address: <http://www.usgs.gov>.

NOTE: Effective July 1, the zip code for the U.S.G.S. in Reston changed to 20192.

Prepared in the Industrial Minerals Section and the Data Collection and Coordination Section, August 28, 1996.

PRINTED ON RECYCLED PAPER

TABLE 1
SALIENT SODA ASH AND NATURAL SODIUM SULFATE STATISTICS 1/

Period	Soda ash (Thousand metric tons)		Natural sodium sulfate (Metric tons)	
	Production 2/	Ending stocks	Production	Ending stocks
1995:				
June	816	154	31,800	38,900
July	860	176	26,100	27,600
August	840	188	26,500	18,700
September	845	185	25,900	11,400
October	870	193	33,200	19,000
November	876	254	30,100	18,800
December	907	306	26,300	16,400
Total (Jan-Jun)	4,900	XX	159,000	XX
Total	10,100	XX	327,000	XX
1996:				
January	765	287	26,800	18,200
February	811	329	28,700	18,000
March	790	257	32,400	20,700
April	836	215	24,200	23,400
May	852	260	15,500	11,300
June	866	284	26,400	14,700
Total	4,920	XX	154,000	XX

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Production data includes soda ash equivalent from soda liquors only. Soda ash equivalent from mine water is not included. Soda liquors for the current year 1996 are withheld to avoid disclosing company proprietary data.

TABLE 2
U.S. EXPORTS OF SODA ASH AND SODIUM SULFATE 1/

(Metric tons)

Period	Disodium carbonate		Disodium Sulfate				Total	
	Quantity (thousand metric tons)	Value 2/ (thousands)	Salt Cake		Other		Quantity	Value 2/ (thousands)
			Quantity	Value 2/ (thousands)	Quantity	Value 2/ (thousands)		
1995:								
May	393	\$43,700	1,180	\$122	526	\$106	1,700	\$228
June	286	35,100	2,300	196	676	179	2,980	375
July	279	34,500	12,600	1,100	479	105	13,000	1,200
August	278	36,200	1,570	168	1,300	725	2,870	893
September	334	45,200	9,760	923	2,490	226	12,200	1,150
October	320	41,700	1,390	111	671	187	2,060	298
November	275	36,600	1,580	131	487	170	2,070	301
December	286	36,300	10,400	793	192	84	10,600	877
Total (Jan-May)	1,510	180,000	19,900	1,440	618	714	20,600	2,160
Total	3,570	445,000	59,500	4,860	6,910	2,390	66,400	7,250
1996: 3/								
January	300	38,700	4,060	317	108	43	4,160	360
February	314	42,100	14,000	1,040	212	88	14,200	1,130
March	270	35,900	2,000	172	2,350	576	4,340	748
April	349	45,300	8,260	646	31	16	8,290	662
May	217	29,000	104	17	63	38	167	55
Total	1,450	191,000	28,400	2,190	2,760	761	31,100	2,950

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Free alongside ship (f.a.s.) value at U.S. ports.

3/ June 1996 data not available at time of publication.

Source: Bureau of the Census, as adjusted by the U.S. Geological Survey, using Journal of Commerce trade data and information.

TABLE 3
U.S. EXPORTS OF SODA ASH BY COUNTRY, 1996 1/

(Metric tons)

Country	January	February	March	April	May	Total	% of total
Argentina	13,000	--	8,950	--	--	22,000	2
Australia	--	--	5,000	--	--	5,000	--
Belgium	6,900	5,610	--	27,600	--	40,100	3
Bolivia	2,500	--	1,100	--	--	3,600	--
Brazil	34	42,300	17,800	7,050	--	67,200	5
Canada	16,700	21,300	23,900	14,100	17,300	93,400	6
Chile	21,900	--	19,100	--	17,200	58,200	4
China	13,000	--	8,000	4,970	4,500	30,500	2
Colombia	11,700	11,100	--	11,600	--	34,400	2
Costa Rica	--	--	--	1	--	1	--
Croatia	--	--	--	8,840	--	8,840	1
Dominican Republic	--	2,160	--	--	--	2,160	--
Germany	--	--	124	--	42	166	--
Guatemala	--	5	3,500	--	--	3,510	--
Hong Kong	--	--	40	--	63	103	--
Indonesia	23,500	25,500	44,400	42,100	23,600	159,000	11
Ireland	383	--	--	--	392	775	--
Israel	--	--	8,000	--	--	8,000	1
Jamaica	2,000	29	--	--	--	2,030	--
Japan	7,900	36,400	--	39,600	11,600	95,500	7
Korea, Republic of	15,100	22,700	5,290	43,600	27,100	114,000	8
Malaysia	10,500	--	--	8,800	12,500	31,800	2
Mexico	33,200	39,300	34,600	32,700	26,800	167,000	11
Netherlands	--	--	2	--	--	2	--
New Zealand	40	20	40	7,070	--	7,170	--
Panama	--	--	--	--	2,000	2,000	--
Peru	4,020	--	4,140	--	6,230	14,400	1
Philippines	12,300	12,300	10,000	--	11,300	45,800	3
Saudi Arabia	18,000	--	--	17,500	3,790	39,300	3
Singapore	--	--	--	4,970	--	4,970	--
South Africa	--	24,500	27,100	25,000	--	76,700	5
Spain	11,400	--	--	--	16,000	27,400	2
Sweeden	--	--	--	32	--	32	--
Taiwan	21,700	13,600	21,200	12,900	15,500	84,900	6
Thailand	23,000	28,000	25,000	8,300	21,500	106,000	7
Trinidad and Tobago	--	--	1,360	--	--	1,360	--
Turkey	--	--	--	7,310	--	7,310	1
United Kingdom	--	1	--	--	--	1	--
Uruguay	--	--	1,000	--	--	1,000	--
Uzbekistan	--	--	7	--	--	7	--
Venezuela	30,800	29,200	--	24,500	--	84,500	6
Total	300,000	314,000	270,000	349,000	217,000	1,450,000	100

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 4
U.S. IMPORTS OF SODA ASH AND SODIUM SULFATE 1/

(Metric tons)

Period	Disodium carbonate		Disodium Sulfate				Total	
	Value 3/		Saltcake 2/		Other		Value 3/	
	Quantity	(thousands)	Quantity	(thousands)	Quantity	(thousands)	Quantity	(thousands)
1995:								
May	6,870	1,110	14,400	1,380	4,990	369	19,400	1,750
June	6,980	999	9,820	992	6,450	411	16,300	1,400
July	6,840	954	10,700	990	5,480	348	16,100	1,340
August	6,640	938	9,920	1,030	4,740	300	14,700	1,330
September	6,770	968	10,500	911	6,750	462	17,200	1,370
October	8,040	1,150	12,400	1,130	5,310	365	17,700	1,490
November	6,240	899	11,000	1,150	5,140	338	16,100	1,490
December	6,480	891	12,400	1,180	3,620	289	16,000	1,470
Total (Jan-May)	34,700	5,190	57,000	5,110	35,100	2,730	92,100	7,840
Total	82,700	12,000	134,000	12,500	72,600	5,250	206,000	17,700
1996: 4/								
January	8,130	1,140	12,000	1,120	4,070	276	16,000	1,390
February	7,400	1,050	10,300	966	3,260	279	13,600	1,250
March	9,460	1,330	13,500	1,150	2,920	220	16,400	1,370
April	8,510	1,200	11,200	993	1,950	186	13,100	1,180
May	8,440	1,130	13,700	1,330	1,690	184	15,400	1,510
Total	41,900	5,850	60,600	5,550	13,900	1,150	74,500	6,700

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes Glauber's salt.

3/ Customs, insurance, and freight (c.i.f) value at U.S. ports.

4/ June 1996 data not available at time of publication.

Source: Bureau of the Census.

TABLE 5
U. S. APPARENT CONSUMPTION OF SODA ASH 1/

(Metric tons)

Period	Production	Imports	Exports	Net stock		Apparent consumption 2/
				Increase	or Decrease	
1995:						
May	843,000	6,870	393,000	--	23,800	481,000
June	816,000	6,980	286,000	--	16,000	553,000
July	860,000	6,840	279,000	22,000	--	566,000
August	840,000	6,640	278,000	12,000	--	557,000
September	845,000	6,770	334,000	--	3,000	521,000
October	870,000	8,040	320,000	8,000	--	550,000
November	876,000	6,240	275,000	61,000	--	546,000
December	907,000	6,480	286,000	52,000	--	575,000
Total (Jan-May)	4,080,000	34,700	1,510,000	--	33,000	2,640,000
Total	10,100,000	82,700	3,570,000	103,000	--	6,510,000
1996:						
January	765,000	8,130	300,000	--	19,000	493,000
February	811,000	7,400	314,000	42,000	--	462,000
March	790,000	9,460	270,000	--	72,000	602,000
April	836,000	8,510	349,000	--	42,000	538,000
May	852,000	8,440	217,000	45,000	--	598,000
June	866,000	NA	NA	24,000	--	NA
Total (Jan-May)	4,050,000	41,900	1,450,000	--	46,000	2,690,000

NA Not available.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Production plus imports minus exports plus or minus stock changes.

TABLE 6
REPORTED CONSUMPTION OF SODA ASH IN THE UNITED STATES, BY END USE, BY QUARTERS 1/

(Metric tons)

SIC Code	End use	1995			1996		
		First quarter	Second quarter	Half year total	First quarter	Second quarter	Half year total
32	Glass:						
3221	Container	417,000	448,000	866,000	372,000	409,000	781,000
3211	Flat	236,000	245,000	481,000	218,000	252,000	470,000
3296	Fiber	52,500	52,700	105,000	59,500	58,600	118,000
3229	Other	63,400	60,900	124,000	66,100	60,700	127,000
	Total	769,000	807,000	1,580,000	716,000	780,000	1,500,000
281	Chemicals	407,000	373,000	780,000	381,000	406,000	787,000
284	Soaps and detergents	186,000	210,000	396,000	203,000	189,000	391,000
26	Pulp and paper	52,400	48,300	101,000	49,900	50,000	99,900
2899	Water treatment 2/	25,700	26,800	52,500	19,000	21,700	40,700
	Fluegas desulfurization	32,200	30,000	62,200	36,100	35,100	71,200
	Distributors	78,000	87,800	166,000	77,600	79,900	158,000
	Other	45,500	44,300	89,800	45,300	47,300	92,600
	Imports 3/	19,000	22,700	41,700	25,000	NA	NA
	Total domestic consumption	1,600,000	1,630,000	3,220,000	1,530,000	1,610,000	3,140,000
	Exports 4/	889,000	858,000	1,750,000	903,000	987,000	1,890,000
	Canada	50,200	41,200	91,400	52,500	50,500	103,000
	Total industry sales 5/	2,480,000	2,490,000	4,970,000	2,430,000	2,600,000	5,030,000
	Total sales from plants	2,380,000	2,440,000	4,820,000	2,300,000	2,530,000	4,830,000
	Total production	2,400,000	2,490,000	4,900,000	2,370,000	2,550,000	4,920,000

NA Not available.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes soda ash equivalent from soda liquors and purge liquors sold to powerplant for water treatment. Sales of mine water are excluded.

3/ Data are from the Bureau of the Census and may vary from the quantity reported by the producer/importer. Actual imports are proprietary data but have been distributed into appropriate end-use categories and included in "Total Domestic Consumption."

4/ As reported by producers. Includes Canada. Data may not necessarily agree with that reported by the Bureau of the Census for the same periods.

5/ Represents soda ash from domestic origin (production and inventory changes) and imports and for exports. Includes soda ash sold by coproducers and distributed by purchasers into appropriate end-use categories.

1ST INTERNATIONAL SODA ASH CONFERENCE THE 50TH ANNIVERSARY OF THE WYOMING SODA ASH INDUSTRY

JUNE 10-12, 1997
ROCK SPRINGS, WYOMING

To commemorate the 50th anniversary of the sinking of the first mine shaft in the trona deposit of the Green River basin, which was the beginning of the Wyoming soda ash industry, the U.S. Geological Survey, the U.S. Bureau of Land Management, and the Wyoming Geological Survey are sponsoring a three-day international conference on soda ash to be held at Rock Springs, WY, on June 10-12, 1997. The meeting will include two days of oral presentations and poster sessions followed by one day of field trips to trona mines and soda ash refineries, plus a field trip to see local outcrops of the Green River Formation.

The conference is wide-ranging in scope, and will cover the geology, resources, and the future of the trona industry throughout the world. Although the Wyoming trona industry will be emphasized, several discussions of sodium carbonate deposits in Colorado, California, and elsewhere in the world will be included. Guest speakers will include international specialists in the mining, processing, and marketing of soda ash.

Topics for the sessions include:

Day 1: morning-Overview, geology and resources
luncheon with speaker

Day 1: afternoon-Leasing and environmental remediation
dinner with speaker

Day 2: morning-Mining practices and processes

Day 2: afternoon-Markets, transportation, financing of worldscale operations

Day 3: Field trip 1- Visit underground workings at trona mines
Field trip 2- Visit processing plants of soda ash operations
Field trip 3- Examine outcrops of Green River Formation

For further information about the conference, contact any of the following:

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Soda Ash and Soda Ash-Related Internet Addresses

As a service to our readers, we are including in this month's report a listing of some internet addresses that pertain to soda ash and topics associated with the soda ash industry. This list will be maintained and updated as new web site addresses are located. If anyone has any additional sites they would like to share with our readers, please e-mail me and I will try to include them in future issues of this report. I may be reached at: dkostick@usgs.gov

Soda Ash and Trona Production Data and Information:

http://minerals.er.usgs.gov/minerals/pubs/commodity/soda_ash

This is the U.S. Geological Survey's home page web site that directly pertains to monthly and annual soda ash and trona data. Historical data are also available. The current *Mineral Industry Surveys* report of monthly production, inventory, trade, and consumption data may be obtained from this site using the Adobe Acrobat reader. This free reader must be downloaded and is available at:

<http://minerals.er.usgs.gov/minerals/pubs/commodity>

The Acrobat reader also is available for downloading on Isonex's homepage (see below).

Soda Ash and Trona Industry:

<http://www.fmc.com/AboutFMC/IndChem/alkaliChem> OR

<http://fmcweb.ncsa.uiuc.edu>

These sites contains information about FMC and its products, including soda ash and some soda ash-derived compounds. Press releases are also available from this location.

http://www.agc.co.jp/index_e.htm

Asahi Glass Co. is a Japanese glass and soda ash producer and a soda ash joint venture partner with Solvay Minerals Inc. in Wyoming. This site contains a corporate profile of the company and news releases.

<http://www.me.uwyo.edu/>

This is the web site for the Wyoming Mining, Manufacturing, and Recycling Information Service, which maintains a web page for each of the Wyoming soda ash companies. Each page has some basic facts about each of the producers. The individual addresses are:

FMC	http://www.me.uwyo.edu/man-docs/WY/WY.960208110100.html
General	http://www.me.uwyo.edu/man-docs/WY/WY.960201040500.html
Tg	http://www.me.uwyo.edu/man-docs/WY/WY.960201041200.html
Solvay	http://www.me.uwyo.edu/man-docs/WY/WY.960201041502.html
OCI	http://www.me.uwyo.edu/man-docs/WY/WY.960201041011.html
Wold Trona Co.	http://www.me.uwyo.edu/man-docs/WY/WY.960206015000.html

<http://www.netresource.com/wsm/sml00335.html>

This site lists the full prospectus and information about General Chemical's common stock option. It also has a link to the Security and Exchange Commission's file on General. The link is:

<http://www.sec.gov/Archives/edgar/data/929697/0000950117-96-000606.txt>

<http://www.msha.gov/FATALS/FTL95M06.HTM>

The Mine Safety and Health Administration has a 15-page report of its investigation of the Solvay Minerals mine accident of February 1995. The web version of the report contains the important discussions found in the original hard copy report but does not contain any of the maps, charts, and photographs.

Soda Ash Consulting Services:

<http://www.eden.com/~isonex>

Isonex, Inc. is a chemical engineering consulting company specializing in the worldwide production, processing, and marketing of soda ash, chloralkali, and derivatives industries. The web site contains a list of products and services available from Isonex, including competitive cost studies, process engineering evaluations, and technical-economic feasibility studies. Isonex also includes a link to other trona sites.

Educational Facilities:

<http://linchome.sw2.k12.wy.us/industry/industry>

The Lincoln Middle School in Green River, Wyoming has an excellent home page devoted to the Wyoming soda ash industry. The school won third place in an international computer competition where the sixth and seventh grade students demonstrated their computer skills using soda ash as the content of their program. The site contains informative text with photos about each of the 5 soda ash companies and Church & Dwight. The site also has links to other soda ash sites.

<http://wolfweb.sw2.k12.wy.us/geoweb/TRONA.HTM>

This site has a 4-page lecture on the mining, refining, and uses of soda ash. It is a good introduction to readers unfamiliar with the soda ash industry.

<http://www.chem.ualberta.ca/courses/plambeck/p101/p01261.htm>

The University of Alberta in Canada has an introductory university chemistry series on industrial processes. This web site has a 5-page discussion about the alkali industry complete with chemical formulas.

<http://www.firehole.com/Wyoming/Sweetwater/RockSprings/Industry/industry.htm>

A brief discussion about the Wyoming soda ash industry is found at the web location.

Glass

<http://www.census.gov>

The U.S. Bureau of the Census has monthly publications on glass container production statistics, quarterly flat glass production statistics, and annual specialty glassware. These reports may be found at the following sites:

Glass Containers: **<http://www.census.gov/econ/www/ip3400.html>** Click on the "Download" icon to preview the current list of documents available on glass containers.

Flat Glass: **<http://www.census.gov/econ/www/ip0300.html>** Click on the "Download" icon to preview the current list of documents available on flat glass.

Glassware: **<http://www.census.gov/econ/www/ip3500.html>** Click on the "Download" icon to preview the current list of documents available on glassware (consumer, scientific, technical, and industrial glassware).

<http://www.recycle.net/recycle/Trade/rs000749>

This is the site for Eco-Glass Group, which specializes in glass recycling. It contains information about glass traders and recyclers of glass containers, flat glass, fiber glass, and glass mirrors.

<http://www.britglass.co.uk>

British Glass has an excellent site that contains data and information about glass container production and recycling. There also is technical information about glass melting, process control, etc. The site also has a link to the "Glass Gazette," which is a publication by FEVE, the European Glass Container Federation that publishes European glass recycling information.

<http://www.AnchorHocking.com>

The web site has good information about the history of glass and the history of Anchor Hocking. It also contains information about products and product care and use.

<http://www.ball.com>

This site is for Ball Corp., which provides information about its subsidiary Ball-Foster Glass Container Co.

<http://www.web.net/~glass>

This is the web site for Consumers Glass, the Canadian glass container manufacturer. The site has data and information about glass recycling in each of the Provinces available in its seasonal publication named "Glass Works."

<http://www.monsanto.com/saflex/resid/glance>

Monsanto has information on its site about laminated and safety glass products. It includes the properties of annealed glass, tempered glass, heat strengthened glass, laminated glass, and insulating glass.

Glass Trade Associations:

<http://www.gpi.org>

This is the site for the Glass Packaging Institute, which is the trade association of the domestic manufacturers of glass containers. The site contains data and information about glass container production and recycling.

<http://ourworld.compuserve.com/homepages/nga/>

The National Glass Association site contains information primarily about architectural and automotive glass.

<http://www.suntemp.com/autoglas.html>

This is the Auto Glass Industry home page that contains links to other automotive glass web sites, glass industry magazines, and the National Glass Association.

Glass Magazines:

<http://ourworld.compuserve.com/homepages/nga/glassmag.htm>

This link is to "Glass Magazine," through the National Glass Association and has information about what is contained in the magazine.

<http://www.usglassmag.com>

This site is for the "U.S. Glass Magazine." It has information about what is in the current issue of the magazine and a guide to glass equipment and machinery.

Related Trade Associations and Sites:

<http://www.saltinstitute.org>

The Salt Institute is the trade association for the salt industry and includes both domestic and foreign companies in its membership. The web site contains a lot of information and statistics about the different types of salt (sodium chloride), including salt mining, processing, and marketing.

<http://www.geocities.com/Athens/2702/>

This is an excellent site for those who want to learn more about the history of salt. Several pages of topics pertain to salt, including geology, physiology, religion, archaeology, and production of salt.